

IN THE CLAIMS:

For the convenience of the Examiner, all pending claims of the present Application are shown below. Please refer to the attached sheets showing a marked up version of any amendments to the claims.

1. A computer/software system for managing telecommunication network elements, comprising:

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one or more operator-driven processes which monitor and manage network elements in real time, using at least one telecommunications network control channel; and
automatically initiated background processes which remotely backup information which has been locally stored in ones of said network elements.

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2. The system of Claim 1, wherein said backup routines launch automatically on a programmed schedule.

3. The system of Claim 1, wherein said backup routines also can remotely restore information which had been locally stored on ones of said network elements.

4. A method for managing a plurality of network elements of a telecommunications network, comprising:

coupling a telecommunications network element manager with a plurality of network elements using at least one telecommunications network control channel;

each network element being operable to store respective local data regarding the configuration or operation of the network element;

receiving, from each of the plurality of network elements, the respective local data;
and

storing the respective local data at a database of the network element manager.

5. The method of Claim 4, wherein at least one of the plurality of network elements comprises an OSI network element having an active memory and a random access memory, further comprising:

copying configuration files to the random access memory, from the active memory;

and

copying contents of the random access memory to the network element manager using OSI FTAM protocol.

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6. The method of Claim 4, wherein at least one of the plurality of network elements comprises an IP gateway network element having an active memory and a random access memory, further comprising:

copying configuration files to the random access memory, from the active memory;

and

copying contents of the random access memory to the network element manager using FTP protocol.

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7. The method of Claim 4, wherein at least a first one of the plurality of network elements comprises an IP subtending network element having an active memory and a first random access memory, and at least a second one of the plurality of network elements comprises a gateway having a second random access memory, further comprising:

copying configuration files to the first random access memory, from the active memory;

copying contents of the first random access memory to the gateway using FTP protocol; and

copying contents of the second random access memory to the network element manager using OSI FTAM protocol.

8. The method of Claim 4, further comprising:
detecting, at the network element manager, a corrupted network element database associated with one of the plurality of network elements; and
restoring the corrupted network element database with configuration data regarding the corrupted network element database, stored at the network element manager.

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9. The method of Claim 8, wherein the network element having the corrupted network management database comprises an OSI network element having a random access memory and a standby memory, further comprising:

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copying configuration files from the network element manager to the random access memory;

copying the configuration files from the random access memory to the standby memory; and

activating the standby memory.

10. The method of Claim 8, wherein the network element having the corrupted network management database comprises an IP gateway network element having a random access memory and a standby memory, further comprising:

copying configuration files from the network element manager to the random access memory using FTP protocol;

copying the configuration files from the random access memory to the standby memory; and

activating the standby memory.

11. The method of Claim 8, wherein the network element having the corrupted network management database comprises an IP subtending network element having a first random access memory and a standby memory, and wherein at least one of the plurality of network elements comprises a gateway having a second random access memory, further comprising:

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copying configuration files from the network element manager to the second random access memory;

copying the configuration files from the second random access memory to the first random access memory using OSI FTAM protocol;

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copying the configuration files from the first random access memory to the standby memory; and

activating the standby memory.

12. A network element manager, comprising:

an interface being operable to communicate with a plurality of telecommunications network elements using at least one telecommunications network control channel, and receive respective local configuration data regarding the plurality of network elements; and

a memory operable to store the respective local configuration data regarding the plurality of network elements.

13. The network element manager of Claim 12, further comprising:

a first processor;

at least one of the network elements comprising an OSI network element having a second processor, an active memory and a random access memory;

the second processor being operable to copy configuration files from the active memory to the random access memory; and

the first processor being operable to copy the configuration files from the random access memory to the memory.

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14. The network element manager of Claim 12, further comprising:
a first processor;
at least one of the network elements comprising an IP gateway network element having a second processor, an active memory and a random access memory;
the second processor being operable to copy configuration files from the active memory to the random access memory;
the first processor being operable to copy the configuration files from the random access memory to the memory; and
the interface being operable to receive the configuration files from the IP gateway network element using the FTP protocol.

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15. The network element manager of Claim 12, further comprising:
a first processor;
at least a first one of the network elements comprising an IP subtending network element having a second processor, an active memory and a first random access memory;
at least a second one of the network elements comprising a gateway having a second random access memory, a second interface, and a third processor;
the second processor being operable to copy configuration files from the active memory to the first random access memory;
the third processor being operable to copy the configuration files from the first random access memory to the second random access memory;
the second interface being operable to receive the configuration files using OSI FTAM protocol; and
the first processor being operable to copy the configuration files from the second random access memory to the memory.

16. The network element manager of Claim 12, further comprising:
a first processor;

wherein the first processor is operable to detect a corrupted network element database associated with one of the plurality of network element, and restore the corrupted network element database with configuration data regarding the corrupted network element database, the configuration data being stored at the memory of the network element manager.

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17. The network element manager of Claim 16, wherein the network element having the corrupted network management database comprises an OSI network element, and further comprising:

the OSI network element having a second processor, a random access memory and a standby memory;

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the first processor being further operable to copy configuration files from the network element manager to the random access memory;

the second processor being operable to copy the configuration files from the random access memory to the standby memory; and

the second processor being further operable to activate the standby memory.

18. The network element manager of Claim 16, wherein the network element having the corrupted network management database comprises an IP gateway network element, and further comprising:

the IP gateway network element having a second processor, a random access memory and a standby memory;

the first processor being operable to copy configuration files from the network element manager to the random access memory using FTP protocol;

the second processor being operable to copy the configuration files from the random access memory to the standby memory; and

the second processor being further operable to activate the standby memory.

19. The network element manager of Claim 16, wherein the network element having the corrupted network management database comprises an IP subtending network element, and further comprising:

at least one of the network elements comprising a gateway having a second processor and a first random access memory;

the IP subtending network element having a third processor, a second random access memory and a standby memory;

the first processor being operable to copy configuration files from the network element manager to the first random access memory;

the second processor being operable to copy the configuration files from the first random access memory to the second random access memory using OSI FTAM protocol;

the third processor being operable to copy the configuration files from the second random access memory to the standby memory; and

the third processor being further operable to activate the standby memory.

20. A telecommunications system, comprising:

a network element manager having a processor, an interface, and a memory;

a plurality of telecommunications network elements, each network element being coupled for communication with the network element manager using at least one telecommunications network control channel;

each of the network elements being operable to store respective local configuration data;

the interface being operable to receive the local configuration data from the plurality of network elements; and

the memory being operable to store the local configuration data at the memory.